

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A self-cleaning colloidal slurry composition for superfinishing a surface of a substrate, the self-cleaning colloidal slurry composition comprising:

- a carrying fluid;
- colloidal particles;
- ~~metal~~ etchant for etching the substrate;
- a surfactant adsorbed and/or precipitated onto a surface of at least one of the substrate and the colloidal particles, the surfactant having a hydrophobic section that forms a steric hindrance barrier between the substrate and the colloidal particles,

wherein the substrate is selected from a group consisting of a glass disk substrate, a ceramic disk substrate, and a glass-ceramic disk substrate for use in a data storage device.

2. (canceled).

3. (currently amended) The self-cleaning colloidal slurry composition as recited in ~~claim 2~~ claim 1, wherein the substrate is a silicate-based glass disk substrate.

1 4. (original) The self-cleaning colloidal slurry composition as recited in claim 1,
2 wherein the colloidal particles include colloidal silica particles, the surfactant is a
3 nonionic surfactant and/or cationic, and the self-cleaning colloidal slurry composition has
4 a pH of approximately 0 to 4.

1 5. (original) The self-cleaning colloidal slurry composition as recited in claim 4,
2 wherein the self-cleaning colloidal slurry composition has a pH of approximately 0.8 to
3 3.0.

1 6. (original) The self-cleaning colloidal slurry composition as recited in claim 5,
2 wherein the self-cleaning colloidal slurry composition has a pH of approximately 1.0 to
3 2.0.

1 7. (original) The self-cleaning colloidal slurry composition as recited in claim 1,
2 wherein the colloidal particles include colloidal silica particles, the surfactant is a cationic
3 quaternary amine surfactant, and the self-cleaning colloidal slurry composition has a pH
4 of approximately 7 to 12.

1 8. (original) The self-cleaning colloidal slurry composition as recited in claim 1,
2 wherein the colloidal particles include colloidal alumina or colloidal silica coated with
3 alumina, and the self-cleaning colloidal slurry composition has a pH of approximately 3.5
4 to 10.5.

1 9. (original) The self-cleaning colloidal slurry composition as recited in claim 4,
2 wherein the colloidal silica particles have a nominal size of approximately 2 - 200 nm.

10. (original) The self-cleaning colloidal slurry composition as recited in claim 6, wherein the colloidal silica particles include colloidal silica spheres having a nominal size of approximately 7 nm.

11. (currently amended) The self-cleaning colloidal slurry composition as recited in claim 3, wherein the ~~metal~~ etchant is a metal etchant selected from a group consisting of Ce, Zr, Ti, Fe, Sn, Al, Cr, Ni, Mn and Zn ions, and combinations thereof, and wherein the metal etchant is present in solution and/or as a colloid and/or as an ion on the colloidal particles.

12. (currently amended) The self-cleaning colloidal slurry composition as recited in claim 11, wherein the metal etchant is Ce ions.

13. (original) The self-cleaning colloidal slurry composition as recited in claim 1, wherein the surfactant is a nonionic and/or cationic surfactant selected from a group consisting of oxygen containing compounds and nitrogen containing compounds, and combinations thereof.

14. (original) The self-cleaning colloidal slurry composition as recited in claim 13, wherein the nonionic surfactant is an oxygen containing compound with moieties of ethylene oxide and/or polyvinyl alcohol.

15. (original) The self-cleaning colloidal slurry composition as recited in claim 13, wherein the nonionic and/or cationic surfactant is a nitrogen containing compound selected from a group consisting of alkaloids and amines, and combinations thereof.

16. (original) The self-cleaning colloidal slurry composition as recited in claim 13,
wherein the nonionic and/or cationic surfactant is a polydentate adsorption surfactant.

17. (original) The self-cleaning colloidal slurry composition as recited in claim 1,
wherein the surfactant is a cationic surfactant.

18. (original) The self-cleaning colloidal slurry composition as recited in claim 1,
wherein the surfactant is selected from a group consisting of anionic surfactants and
quaternary amine surfactants.

35. (currently amended) A self-cleaning colloidal slurry composition for finishing
a surface of a substrate, the self-cleaning colloidal slurry composition comprising:
a carrying fluid;
colloidal particles;
~~metal~~ etchant for etching the substrate;
a surfactant adsorbed and/or precipitated onto a surface of at least one of the
substrate and the colloidal particles, the surfactant having a hydrophobic section that
forms a steric hindrance barrier between the substrate and the colloidal particle,
wherein the substrate is selected from a group consisting of a glass disk substrate,
a ceramic disk substrate, and a glass-ceramic disk substrate for use in a data storage
device, and
wherein the colloidal particles have a nominal size of approximately 70 - 200 nm
to provide a textured surface on the substrate.

36. (canceled).

1 40. (new) The self-cleaning colloidal slurry composition as recited in claim 14,
2 wherein the surfactant is an ethylene oxide propylene oxide block copolymer.

1 41. (new) A self-cleaning colloidal slurry composition for superfinishing a surface
2 of a substrate, the self-cleaning colloidal slurry composition comprising:
3 a carrying fluid;
4 colloidal particles;
5 etchant for etching the substrate;
6 a surfactant precipitated onto a surface of at least one of the substrate and the
7 colloidal particles, the surfactant having a hydrophobic section that forms a steric
8 hindrance barrier between the substrate and the colloidal particles,
9 wherein the substrate is selected from a group consisting of a glass disk substrate,
10 a ceramic disk substrate, and a glass-ceramic disk substrate for use in a data storage
11 device.

1 42. (new) The self-cleaning colloidal slurry composition as recited in claim 41,
2 wherein the surfactant is sodium octyl sulfate.